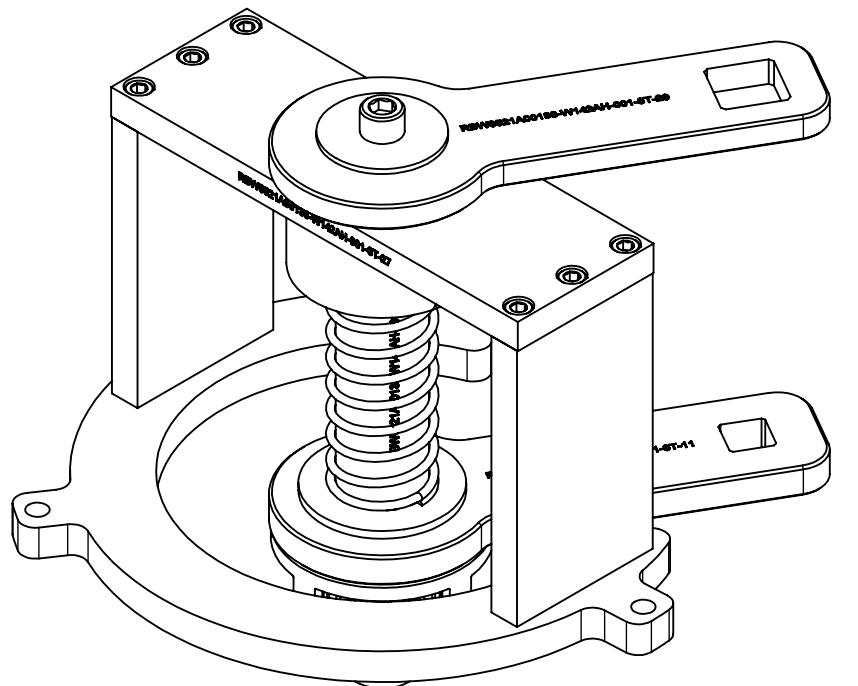


8 7 6 5 4 3 2 1

ITEM #	QTY	P/N	DESCRIPTION
-1	1	RBW6521A00138-W142AH-001-3T-1	SPLINE
-9	1	RBW6521A00138-W142AH-001-3T-9	SPANNER SOCKET
-11	1	RBW6521A00138-W142AH-001-3T-11	WRENCH
-27	1	RBW6521A00138-W142AH-001-3T-27	BASE ASSEMBLY
-29	1	RBW6521A00138-W142AH-001-3T-29	WRENCH
-31	1	RBW6521A00138-W142AH-001-3T-31	SPACER
32	1	DTSP10009-1	SPRING
33	1	AN970-5	WASHER
34	1	NAS1149F1690P (alt McMaster 98029A038)	WASHER
35	1	NAS1351-5-12P	SOCKET HEAD CAP SCREW



RBW6521A00138-W142AH-001-3T NUT TORQUE TOOL

NOTES:

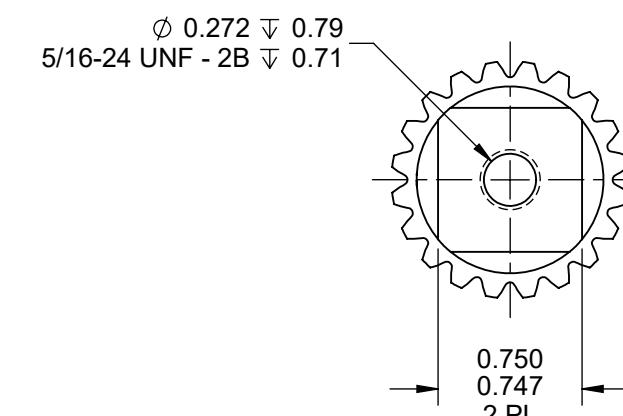
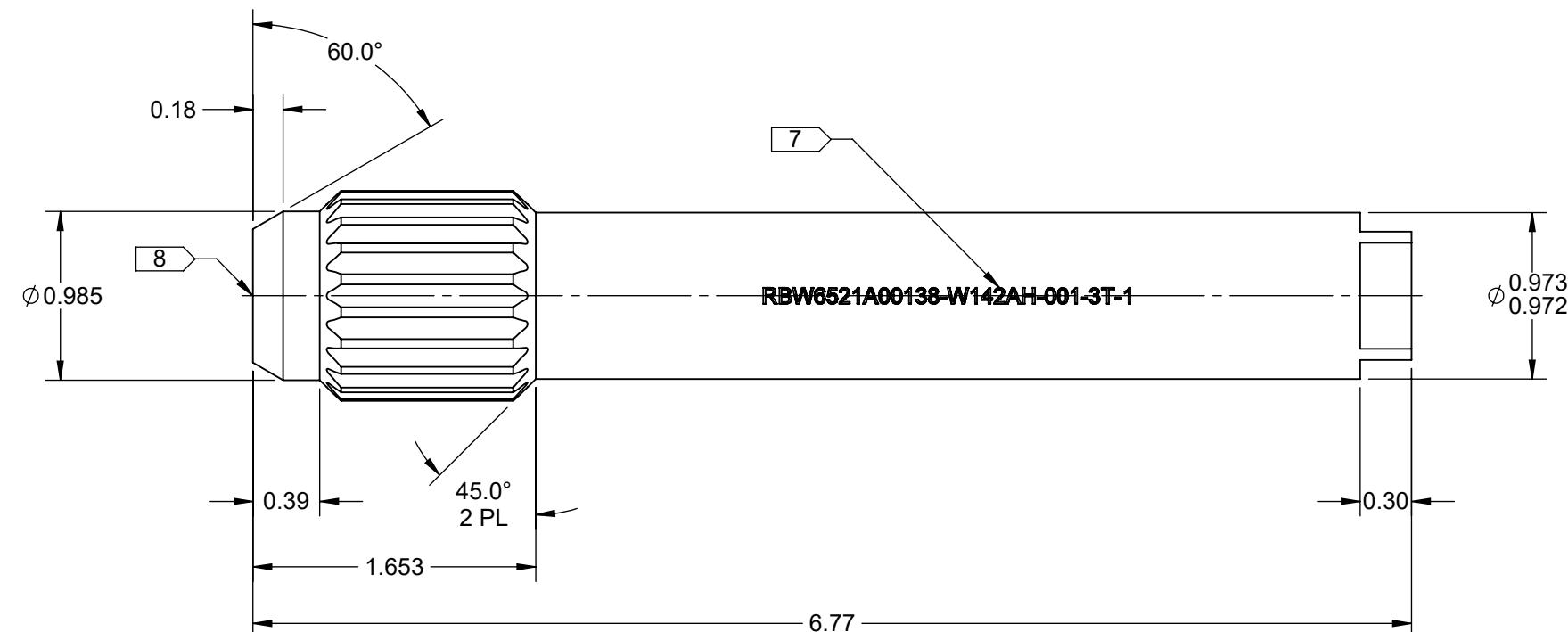
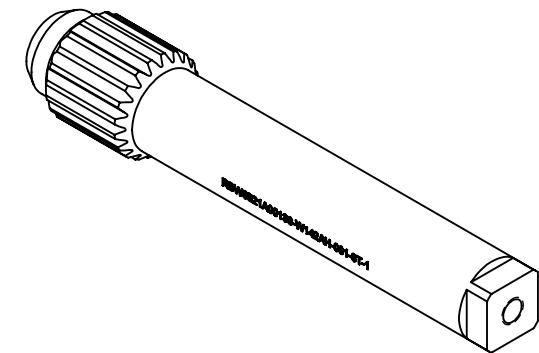
- 1) MATERIAL: N/A
- 2) HEAT TREAT: N/A
- 3) FINISH: N/A
- 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°
 X.XX = +/- 0.01" / +/- 0.5°
 X.XXX = +/- 0.005" / +/- 0.1°
 X.XXXX = +/- 0.0005" / +/- 0.05°
 PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/-0.005"
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: N/A
- 7) IDENTIFICATION: N/A
- 8) ASSEMBLE AS SHOWN

F	UPDATED DRAWING TEMPLATE FOR PREVIOUS REVISION REFER TO RBW6521A00138-W142AH-3T REV. 5. REFER TO CAR 20-365 FOR LIST OF CHANGES MADE			20-515	KPT
REV.	DESCRIPTION			ECN #	BY
DESIGN		KPT	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
DRAWN		KPT			
CHECKED		SAD			
MFG. APPR.		FK			
APPROVED		<i>M. Lee</i>	TITLE NUT TORQUE TOOL		SCALE NTS
DATE		20.03.23	TOOL P/N RBW6521A00138-W142AH-001-3T		REV. F
					SHEET 1 OF 10
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SHAFT DIN 5480 - W32 X 1.5 X 20 X 8f [Metric Dimensions]

NUMBER OF TEETH	20
MODULE	1.5
PRESSURE ANGLE	30°
TIP DIAMETER	[31.54-31.70]
ROOT FORM CIRCLE DIAMETER	[28.93] MAX
ROOT DIAMETER	[28.01-28.70]
MAX EFFECTIVE TOOTH THICKNESS	[2.538]
MAX ACTUAL TOOTH THICKNESS	[2.521] REF
MIN ACTUAL TOOTH THICKNESS	[2.493]
MEASURING CIRCLE DIAMETER	[3.000]
MAX DIMENSION OVER MEASURING CIRCLES	[35.023] REF
MIN DIMENSION OVER MEASURING CIRCLES	[34.982]



RBW6521A00138-W142AH-001-3T-1 SPLINE

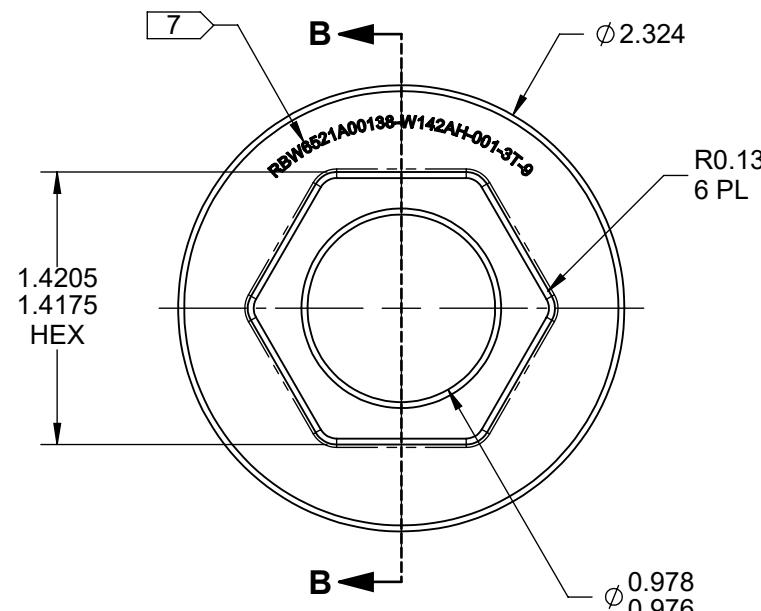
9

NOTES:

- 1) MATERIAL: AISI 4140 ALLOY STEEL
- 2) HEAT TREAT: N/A
- 3) FINISH: ZINC PLATE PER ASTM B633 SC 2 TYPE 2 (BLACK CHROMATE CONVERSION COATING)
- 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°
X.XX = +/- 0.01" / +/- 0.5°
X.XXX = +/- 0.005" / +/- 0.1°
X.XXXX = +/- 0.0005" / +/- 0.05°
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005 TO 0.010
- 7) IDENTIFICATION: MACHINE ENGRAVE TOOL P/N, "RBW6521A00138-W142AH-001-3T-1", AS SHOWN
- 8) CENTER DRILL IS ACCEPTABLE
- 9) DIMENSIONAL LIMITS APPLY AFTER PLATING

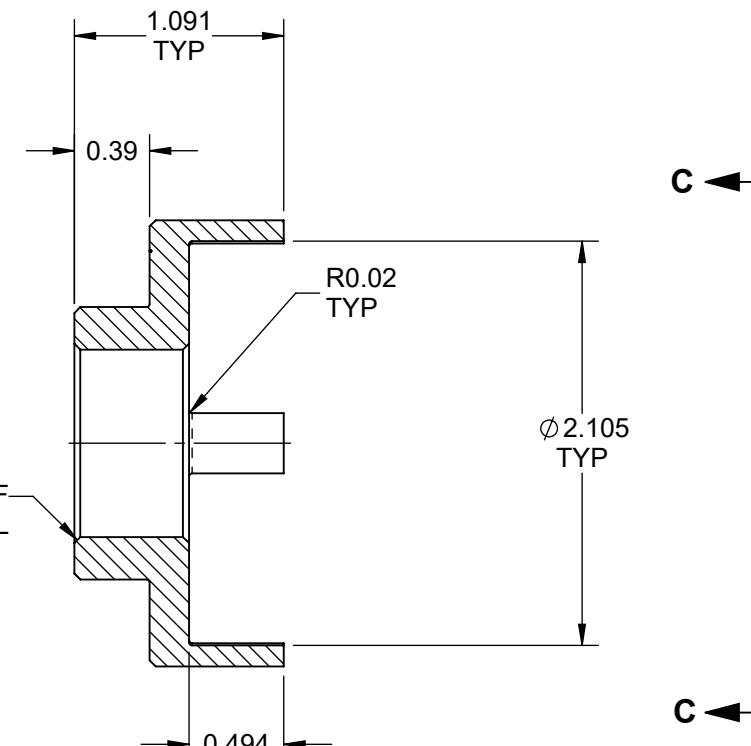
DESIGN	KPT	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
DRAWN	KPT	
CHECKED	SAD	
MFG. APPR.	FK	
APPROVED	<i>M Lee</i>	
DATE	20.03.23	TITLE NUT TORQUE TOOL SCALE NTS REV. F TOOL P/N RBW6521A00138-W142AH-001-3T SHEET 2 OF 10
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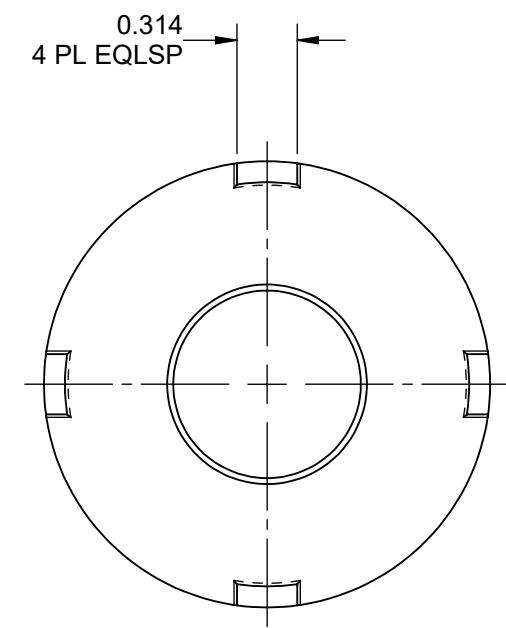


RBW6521A00138-W142AH-001-3T-9 SPANNER SOCKET

8



SECTION B-B



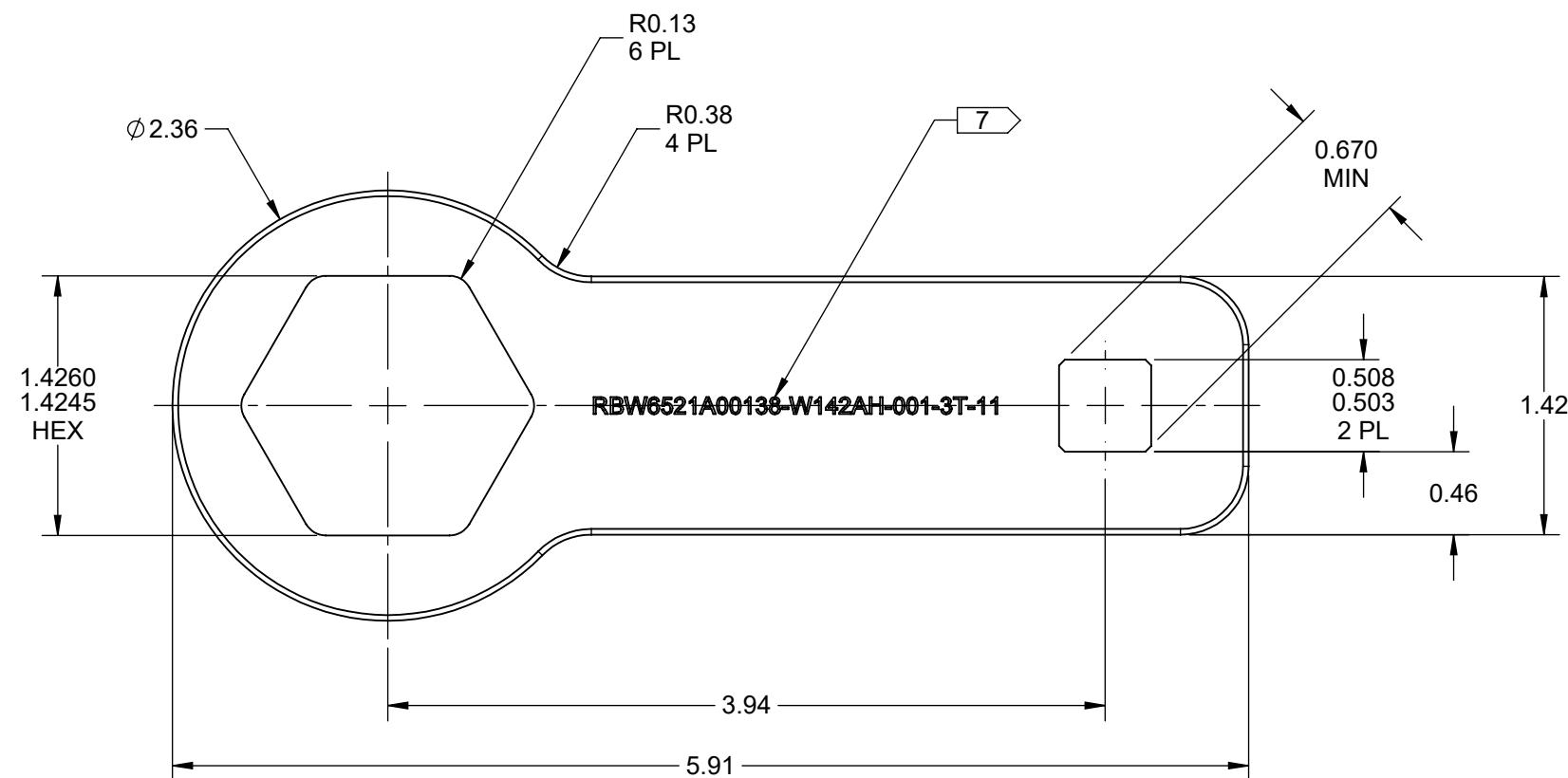
VIEW C-C

NOTES:

- 1) MATERIAL: 01 TOOL STEEL
- 2) HEAT TREAT: 48-52 RC
- 3) FINISH: ZINC PLATE PER ASTM B633 SC 2 TYPE 2 (BLACK CHROMATE CONVERSION COATING)
- 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°
X.XX = +/- 0.01" / +/- 0.5°
X.XXX = +/- 0.005" / +/- 0.1°
X.XXXX = +/- 0.0005" / +/- 0.05°
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/-0.005"
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005 TO 0.010
- 7) IDENTIFICATION: MACHINE ENGRAVE OR DOT MARK P/N, "RBW6521A00138-W142AH-001-3T-9", AS SHOWN
- 8) DIMENSIONAL LIMITS APPLY AFTER PLATING

DESIGN	KPT	DART AEROSPACE LTD	
DRAWN	KPT	HAWKESBURY, ONTARIO, CANADA	
CHECKED	SAD	REV. F	
MFG. APPR.	FK	TOOL P/N RBW6521A00138-W142AH-001-3T	
APPROVED	<i>M Lee</i>	SHEET 3 OF 10	
TITLE NUT TORQUE TOOL		SCALE NTS	
DATE 20.03.23		COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

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RBW6521A00138-W142AH-001-3T-11 WRENCH

8

NOTES:

1) MATERIAL: AISI 4140 ALLOY STEEL
2) HEAT TREAT: 32-36 RC

3) FINISH: ZINC PLATE PER ASTM B633 SC 2 TYPE 2 (BLACK CHROMATE CONVERSION COATING)

4) TOLERANCES: X.X = +/- 0.1" / +/- 1°

X.XX = +/- 0.01" / +/- 0.5°

X.XXX = +/- 0.005" / +/- 0.1°

X.XXXX = +/- 0.0005" / +/- 0.05°

PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/-0.005"

5) UNITS: INCHES UNLESS OTHERWISE NOTED

6) BREAK SHARP EDGES: 0.005 TO 0.010

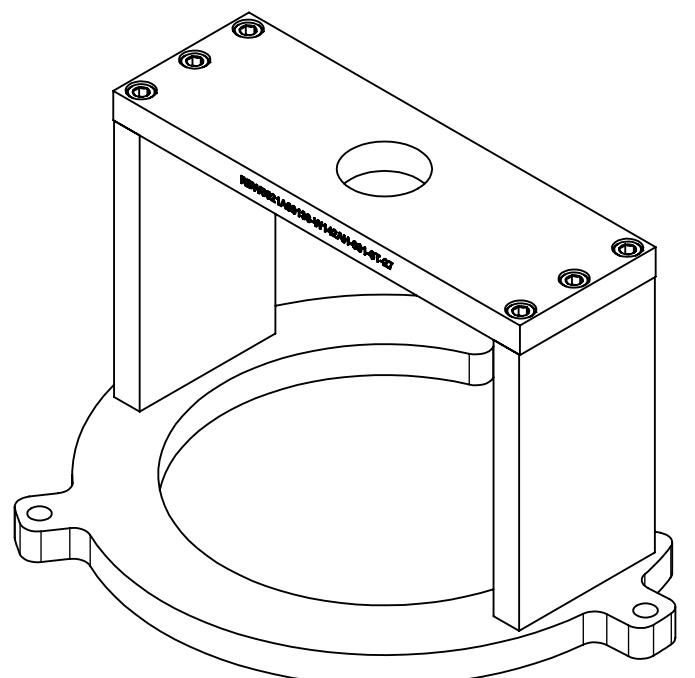
7) IDENTIFICATION: MACHINE ENGRAVE OR DOT MARK P/N, "RBW6521A00138-W142AH-001-3T-11", AS SHOWN

8) DIMENSIONAL LIMITS APPLY AFTER PLATING

DESIGN	KPT	DART AEROSPACE LTD	
DRAWN	KPT	HAWKESBURY, ONTARIO, CANADA	
CHECKED	SAD	REV. F	
MFG. APPR.	FK	TOOL P/N RBW6521A00138-W142AH-001-3T	
APPROVED	<i>M. Lee</i>	SHEET 4 OF 10	
TITLE NUT TORQUE TOOL		SCALE	NTS
DATE 20.03.23			
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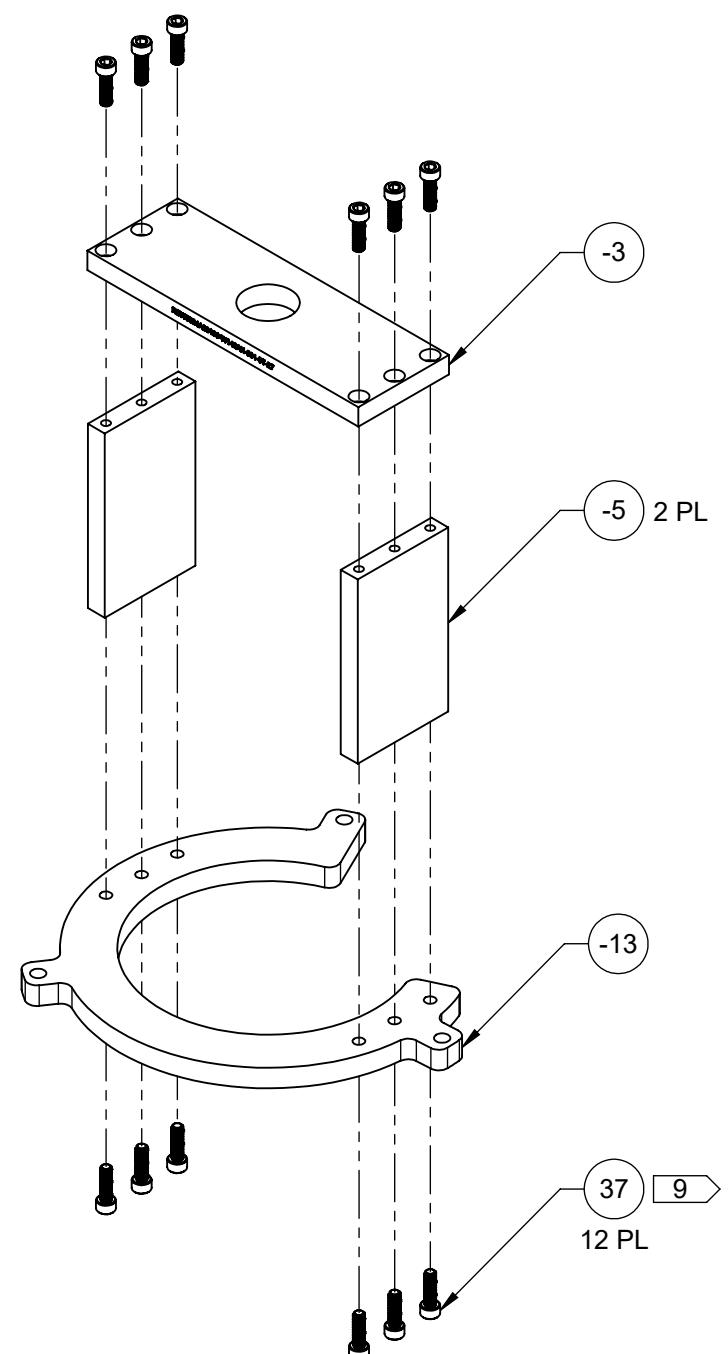
ITEM #	QTY	P/N	DESCRIPTION
-3	1	RBW6521A00138-W142AH-001-3T-3	TOP BRACE
-5	2	RBW6521A00138-W142AH-001-3T-5	SIDE BRACE
-13	1	RBW6521A00138-W142AH-001-3T-13	BASE
37	12	NAS1351-3-10P	SOCKET HEAD CAP SCREW



RBW6521A00138-W142AH-001-3T-27 BASE ASSEMBLY

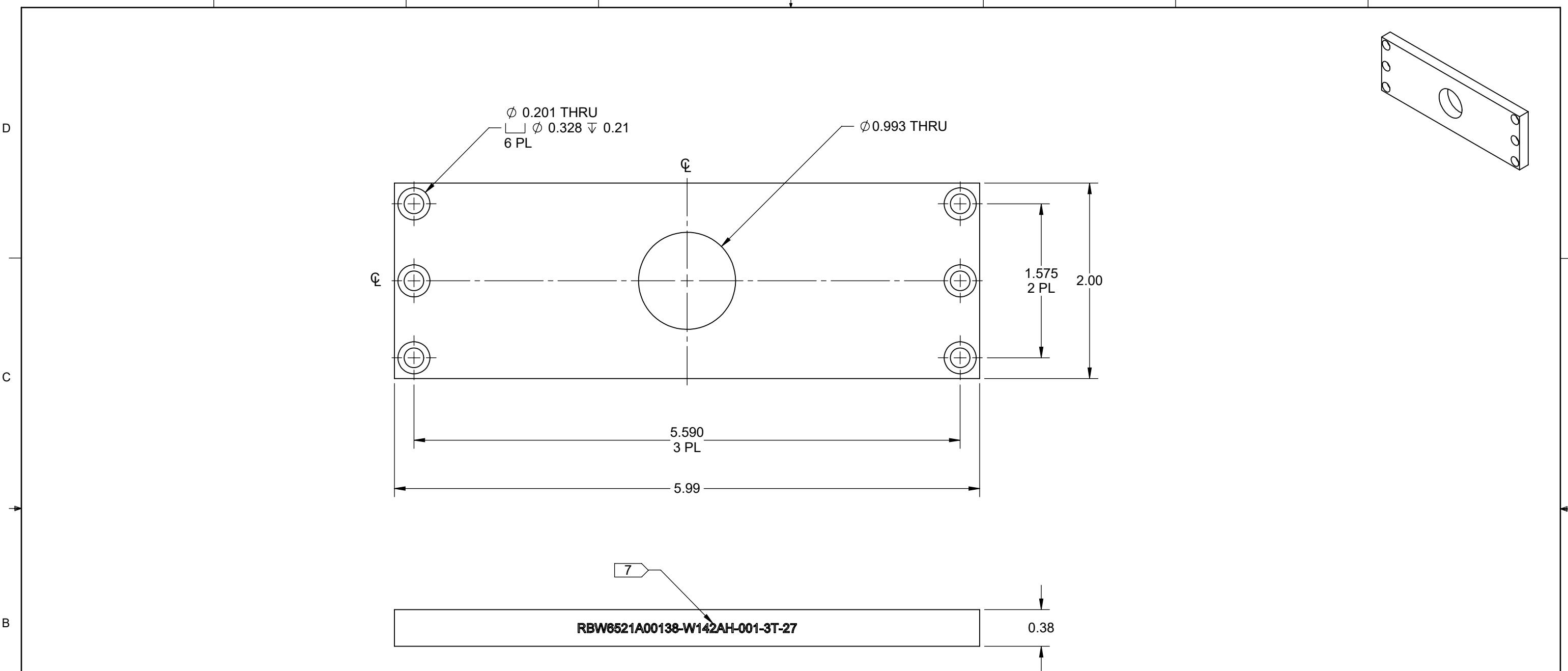
NOTES:

- 1) MATERIAL: N/A
- 2) HEAT TREAT: N/A
- 3) FINISH: N/A
- 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°
X.XX = +/- 0.01" / +/- 0.5°
X.XXX = +/- 0.005" / +/- 0.1°
X.XXXX = +/- 0.0005" / +/- 0.05°
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: N/A
- 7) IDENTIFICATION: N/A
- 8) ASSEMBLE AS SHOWN
- 9) APPLY RED THREADLOCKER LOCTITE 263/262 ON THREADS OF ITEM 37 THEN ASSEMBLE WITH ITEMS -3 AND -5. TORQUE TO 20-25 IN-LB.



DESIGN	KPT	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	KPT		
CHECKED	SAD	TOOL P/N RBW6521A00138-W142AH-001-3T	
MFG. APPR.	FK	REV. F SHEET 5 OF 10	
APPROVED	<i>M Lee</i>	TITLE NUT TORQUE TOOL	
DATE	20.03.23	SCALE	NTS
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RBW6521A00138-W142AH-001-3T-3 TOP BRACE

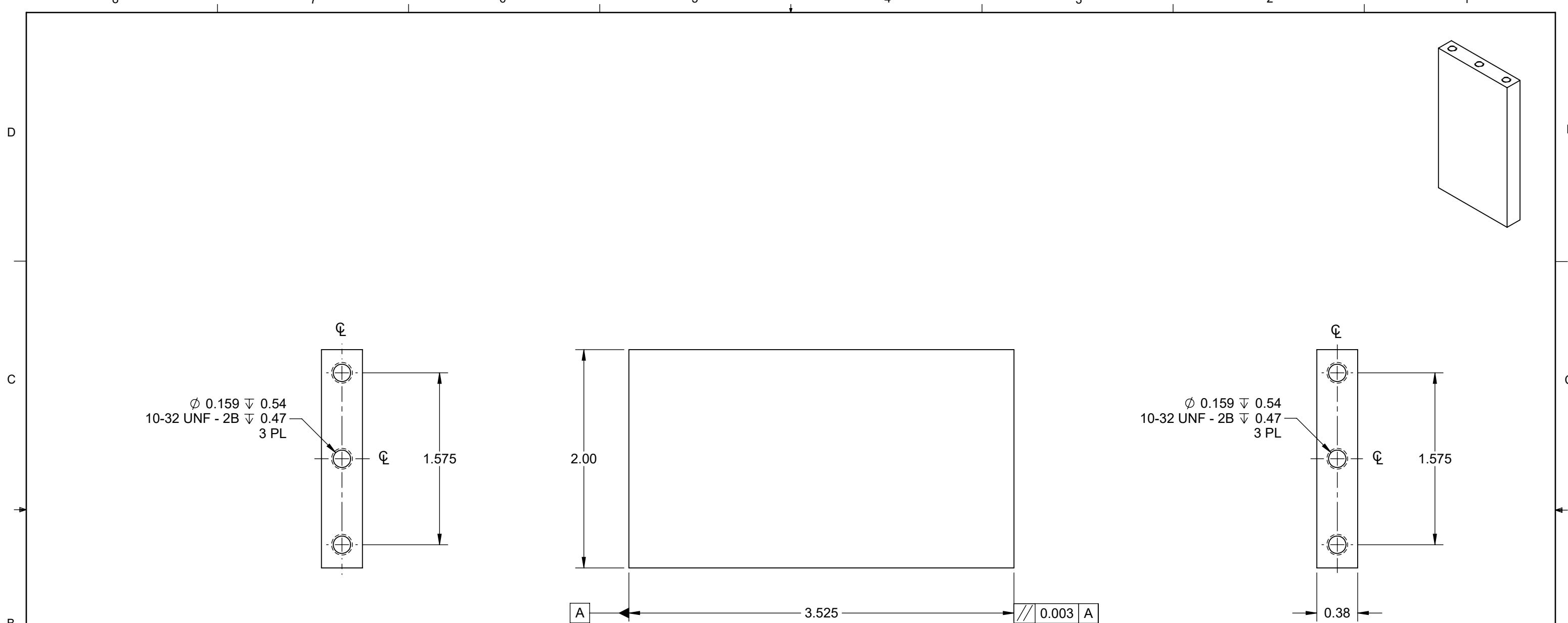
8 9

NOTES:

- 1) MATERIAL: AISI 4140 ALLOY STEEL
- 2) HEAT TREAT: N/A
- 3) FINISH: ZINC PLATE PER ASTM B633 SC 2 TYPE 2 (BLACK CHROMATE CONVERSION COATING)
- 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°
X.XX = +/- 0.01" / +/- 0.5°
X.XXX = +/- 0.005" / +/- 0.1°
X.XXXX = +/- 0.0005" / +/- 0.05°
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005 TO 0.010
- 7) IDENTIFICATION: MACHINE ENGRAVE OR DOT MARK P/N, "RBW6521A00138-W142AH-001-3T-27", AS SHOWN
- 8) PART IS SYMMETRIC ABOUT CENTERLINES
- 9) DIMENSIONAL LIMITS APPLY AFTER PLATING

DESIGN	KPT	DART AEROSPACE LTD	
DRAWN	KPT	HAWKESBURY, ONTARIO, CANADA	
CHECKED	SAD	REV. F	
MFG. APPR.	FK	TOOL P/N RBW6521A00138-W142AH-001-3T	
APPROVED	<i>M. Lee</i>	SHEET 6 OF 10	
TITLE NUT TORQUE TOOL		SCALE	NTS
DATE 20.03.23			
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RBW6521A00138-W142AH-001-3T-5 SIDE BRACE

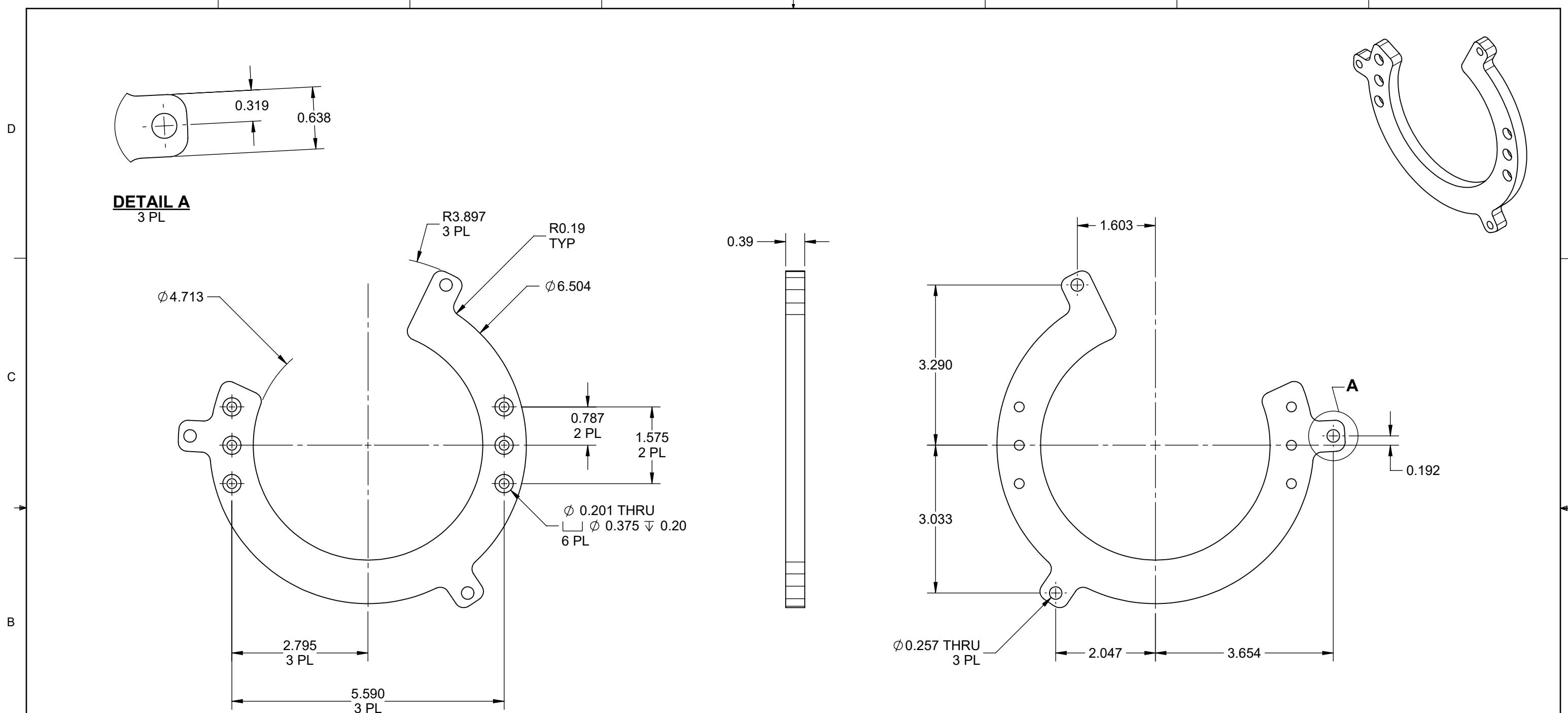
8 > 9

NOTES:

- 1) MATERIAL: AISI 4140 ALLOY STEEL
- 2) HEAT TREAT: N/A
- 3) FINISH: ZINC PLATE PER ASTM B633 SC 2 TYPE 2 (BLACK CHROMATE CONVERSION COATING)
- 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°
X.XX = +/- 0.01" / +/- 0.5°
X.XXX = +/- 0.005" / +/- 0.1°
X.XXXX = +/- 0.0005" / +/- 0.05°
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005 TO 0.010
- 7) IDENTIFICATION: N/A
- 8) PART IS SYMMETRIC ABOUT CENTERLINES
- 9) DIMENSIONAL LIMITS APPLY AFTER PLATING

DESIGN	KPT	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	KPT		
CHECKED	SAD	TOOL P/N RBW6521A00138-W142AH-001-3T	
MFG. APPR.	FK	REV. F SHEET 7 OF 10	
APPROVED	<i>M Lee</i>	TITLE NUT TORQUE TOOL	SCALE NTS
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RBW6521A00138-W142AH-001-3T-13 BASE

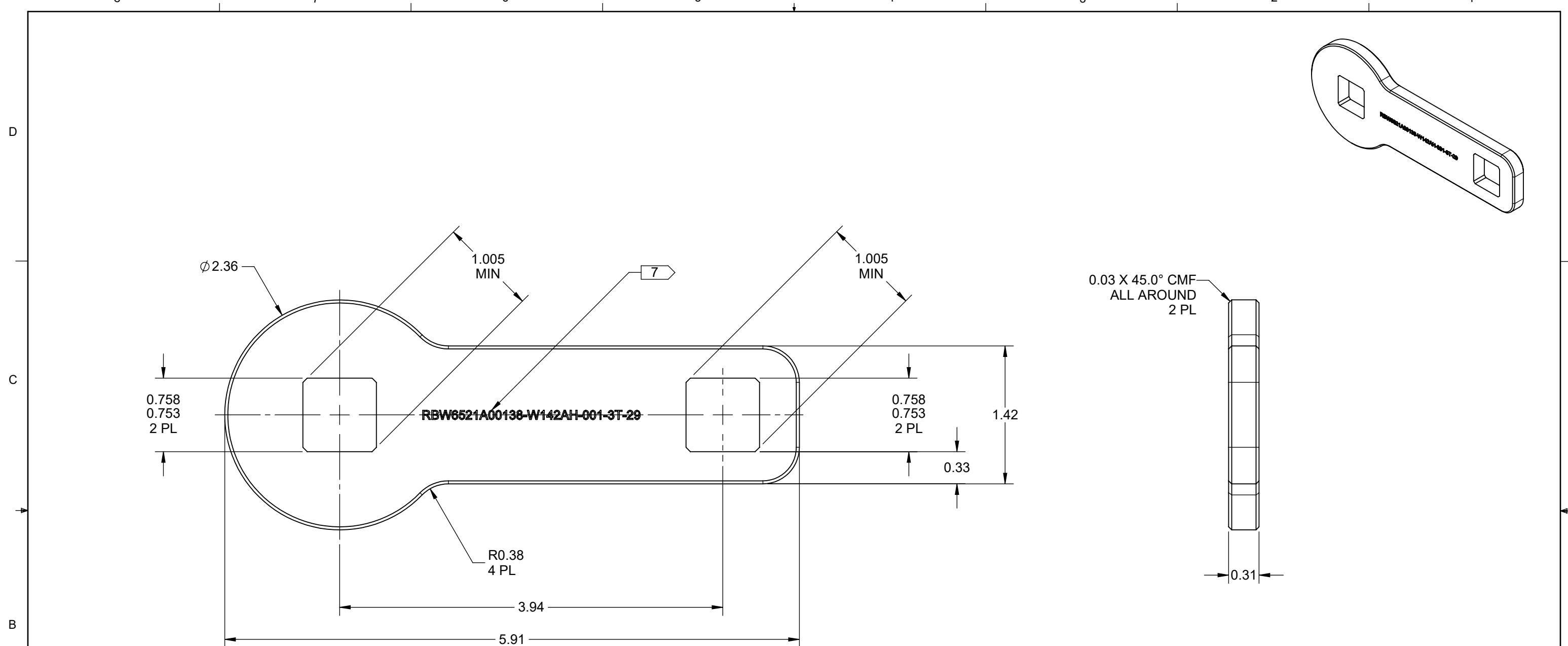
8

NOTES:

- 1) MATERIAL: AISI 4140 ALLOY STEEL
- 2) HEAT TREAT: N/A
- 3) FINISH: ZINC PLATE PER ASTM B633 SC 2 TYPE 2 (BLACK CHROMATE CONVERSION COATING)
- 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°
X.XX = +/- 0.01" / +/- 0.5°
X.XXX = +/- 0.005" / +/- 0.1°
X.XXXX = +/- 0.0005" / +/- 0.05°
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/-0.005"
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005 TO 0.010
- 7) IDENTIFICATION: N/A
- 8) DIMENSIONAL LIMITS APPLY AFTER PLATING

DESIGN	KPT	DART AEROSPACE LTD	
DRAWN	KPT	HAWKESBURY, ONTARIO, CANADA	
CHECKED	SAD	REV. F	
MFG. APPR.	FK	TOOL P/N RBW6521A00138-W142AH-001-3T	
APPROVED	<i>M. Lee</i>	SHEET 8 OF 10	
TITLE NUT TORQUE TOOL		SCALE NTS	
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RBW6521A00138-W142AH-001-3T-29 WRENCH

8

NOTES:

- 1) MATERIAL: AISI 4140 ALLOY STEEL
- 2) HEAT TREAT: 32-36 RC
- 3) FINISH: ZINC PLATE PER ASTM B633 SC 2 TYPE 2 (BLACK CHROMATE CONVERSION COATING)
- 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°
X.XX = +/- 0.01" / +/- 0.5°
X.XXX = +/- 0.005" / +/- 0.1°
X.XXXX = +/- 0.0005" / +/- 0.05°
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/- 0.005"
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005 TO 0.010
- 7) IDENTIFICATION: MACHINE ENGRAVE OR DOT MARK P/N, "RBW6521A00138-W142AH-001-3T-29", AS SHOWN
- 8) DIMENSIONAL LIMITS APPLY AFTER PLATING
- 9) HAND BUFF EDGE

DESIGN	KPT	DART AEROSPACE LTD	
DRAWN	KPT	HAWKESBURY, ONTARIO, CANADA	
CHECKED	SAD	REV. F	
MFG. APPR.	FK	TOOL P/N RBW6521A00138-W142AH-001-3T	
APPROVED	<i>M.Lee</i>	SHEET 9 OF 10	
TITLE NUT TORQUE TOOL		SCALE	NTS
DATE 20.03.23			
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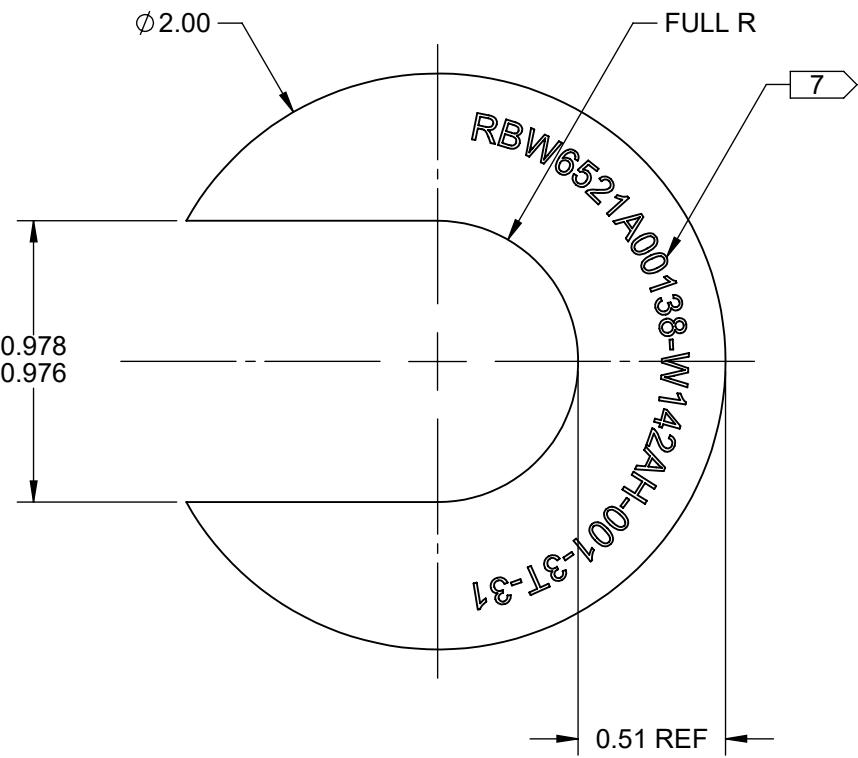
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B

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RBW6521A00138-W142AH-001-3T-31 SPACER

NOTES:

- 1) MATERIAL: 6061-T6 ALUMINUM
- 2) HEAT TREAT: N/A
- 3) FINISH: RED ANODIZE PER MIL-A-8625 TYPE II CLASS 2
- 4) TOLERANCES: X.X = +/- 0.1" / +/- 1°
X.XX = +/- 0.01" / +/- 0.5°
X.XXX = +/- 0.005" / +/- 0.1°
X.XXXX = +/- 0.0005" / +/- 0.05°
PARALLELISM, ECCENTRICITY AND SYMMETRY ABOUT ALL CENTER LINES = +/-0.005"
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005 TO 0.010
- 7) IDENTIFICATION: MACHINE ENGRAVE OR DOT MARK P/N, "RBW6521A00138-W142AH-001-3T-31", AS SHOWN

DESIGN	KPT	DART AEROSPACE LTD	
DRAWN	KPT	HAWKESBURY, ONTARIO, CANADA	
CHECKED	SAD	TOOL P/N	
MFG. APPR.	FK	REV. F	
APPROVED	<i>MLee</i>	RBW6521A00138-W142AH-001-3T	
DATE 20.03.23		SHEET 10 OF 10	
TITLE NUT TORQUE TOOL		SCALE	<input checked="" type="checkbox"/> <input type="checkbox"/>
		NTS	<input type="checkbox"/> <input checked="" type="checkbox"/>
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